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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,205

03/17/2005

Takeshi Tanaka

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Stevens Davis Miller & Mosher
1615 L Street NW
Suite 850
Washington, DC 20036

EXAMINER

PARK, JEONG S

ART UNIT

PAPER NUMBER

2109

MAIL DATE

DELIVERY MODE

05/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/528,205

Applicant(s)

TANAKA ET AL.

Examiner

Jeong S. Park

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/17/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 6, 7, 9 and 14-26 are objected to because of the following informalities:

In claim 6, line 8, the word "a communication" should be corrected as --the communication-- for clear understanding of the claim;

In claim 6, line 12, the phrase "said authentication data" should be corrected as --an authentication data-- for clear understanding of the claim;

In claim 6, line 15, the phrase "said information storing means" should be corrected as --information storing means-- for clear understanding of the claim;

In claim 9, line 3, the phrase "the authentication result" should be corrected as --an authentication result-- for clear understanding of the claim;

In claim 14, line 8, the phrase "said authentication data" should be corrected as --an authentication data-- for clear understanding of the claim;

In claim 16, line 10, the phrase "the authentication result" should be corrected as --an authentication result-- for clear understanding of the claim;

In claim 17, line 4, the phrase "the authentication result" should be corrected as --an authentication result-- for clear understanding of the claim;

In claim 18, line 6, the word "it" should be corrected as --said terminal authenticating server-- for clear understanding of the claim;

In claim 21, lines 2, 11 and 20, the word "it" should be corrected as --the terminal authenticating server-- for clear understanding of the claim. Similar correction should be made for claim 22, line 6, claim 23, lines 2 and 9, claim 24, line 2 and claim 25, line 5;

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In claim 23, line 10, the phrase "said authentication data" should be corrected as --an authentication data-- for clear understanding of the claim;

In claim 23, line 14, the phrase "said information storing means" should be corrected as --information storing means-- for clear understanding of the claim;

In claim 25, line 8, the phrase "the authentication result" should be corrected as --an authentication result-- for clear understanding of the claim. Similar correction should be made for claim 26, line 3; and

In claim 26, line 8, the phrase "said authentication request" should be corrected as --an authentication request-- for clear understanding of the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 6, 7, 9-11, 14, 15, 17-20, 23, 24 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Perkins et al. (hereinafter Perkins)(U.S. Publication No. US 2002/0178358 A1).

Regarding claims 1, 10 and 18, Perkins teaches as follows:

A terminal authenticating system and apparatus or a method (see, e.g., abstract) wherein when a mobile terminal (mobile node, 150 in figure 1) participates in a mobile network (radio access network, 110 in figure 1) arranged inside a mobile body, a first authenticating server (AAAH, 320 in figure 3, see, e.g., page 1, paragraph [0016], lines 11-13) arranged at a place away from said mobile network can authenticate said mobile terminal, said terminal authenticating system being characterized in that a second authenticating server (AAAF, 315 in figure 3, see, e.g., page 1, paragraph [0016], lines 13-14) is arranged inside said mobile network (radio access network, 110 in figure 1), and even said second authenticating server can authenticate said mobile terminal (the authentication of mobile node is achieved in a single round trip from mobile node to AAAF to AAAH and back when mobile node moves from home authority to foreign authority, see, e.g., page 4, paragraph [0039], lines 1-5).

Regarding claims 2 and 19, Perkins teaches as follows:

The second authenticating server (AAAF, in figure 3) has authenticating means, which can authenticate said mobile terminal (AAA server is operative to provide authentication, transmits AAA rules and receives data from the nodes, see, e.g., page 3, paragraph [0029]); and

Information storing means (mass memory, see, e.g., page 3, paragraph [0031], lines 1-7), which can store an authentication data (signatures prepared by mobile nodes or AAAH) to be referred when said mobile terminal is authenticated (hard disk drive is utilized to store AAA rules, user database, relational databases, see, e.g., page 3, paragraph [0034], lines 6-11).

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Regarding claims 3, 11 and 20, Perkins teaches as follows:

An authentication request is transmitted from said mobile terminal to said second authenticating server (the mobile node generates a signature and sends the signature to AAAF to authenticate itself to the network, see, e.g., page 4, paragraph [0039], lines 25-26).

Regarding claims 6, 14 and 23, Perkins teaches as follows:

The second authenticating server (AAAF) has connection judging means (communication protocol) for judging whether or not a communication between said first authenticating server (AAAH) and said second authenticating server (AAAF) is possible, and said connection judging means judges whether or not a communication with said first authenticating server is possible (since each server use the Common Open Policy Services (COPS) protocol on top of the Transmission Control Protocol (TCP), the judging means is inherent in this system. see, e.g., page 3, paragraph [0030], lines 7-12); and

If the communication with said first authenticating server is judged to be possible, said second authenticating server (AAAF) obtains said authentication data (signature used to verify the network to mobile node) required to authenticate said mobile terminal (mobile node) from said first authenticating server (AAAH) at any timing and stores in said information storing means (mass memory)(AAAH sends the signature to AAAF, see, e.g., page 4, paragraph [0039], lines 33-38).

Regarding claims 7, 15 and 24, Perkins teaches as follows:

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The second authenticating server (AAAF) obtains said authentication data (signature used to verify the network to mobile node) from said first authenticating server at a predetermined timing (wherein the predetermined timing is interpreted as a period of process cycles) and updates said authentication data stored in said information storing means (AAAH sends the signature to AAAF and AAAF also has mass memory to store the authentication data, see, e.g., page 4, paragraph [0039], lines 33-38).

Regarding claims 9, 17 and 26, Perkins teaches as follows:

The authentication result carried out by said first authenticating server (AAAH) or said second authenticating server (AAAF) is reported to said mobile terminal transmitting said authentication request from said second authenticating server (AAAF forwards the signature, which is generated by AAAH to verify the mobile node, to mobile node for authentication, see, e.g., page 4, paragraph [0039], lines 38-40).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 5, 8, 12, 13, 16, 21, 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins et al. (hereinafter Perkins)(U.S. Publication No. US 2002/0178358 A1) in view of Reader (U.S. Publication No. US 2004/0054905 A1).

Regarding claims 4, 12 and 21, Perkins discloses as follows:

The second authenticating server (AAAF) has connection judging means (communication protocol) for judging whether or not a communication between said first authenticating server (AAAH) and said second authenticating server (AAAF) is possible, and said connection judging means judges whether or not a communication with said first authenticating server is possible (since each server use the Common Open Policy Services (COPS) protocol on top of the Transmission Control Protocol (TCP) the judging means is inherent in this system. See, e.g., page 3, paragraph [0030], lines 7-12); and

If the communication with said first authenticating server (AAAH) is judged to be possible, sends said authentication request to said first authenticating server (AAAF forwards the signature created by mobile node to AAAH, see, e.g., page 4, paragraph [0039], lines 25-28) and receives an authentication result (signature prepared by AAAH) of said mobile terminal from said first authenticating server (AAAH sends the signature to AAAF, see, e.g., page 4, paragraph [0039], lines 33-38).

Perkins does not disclose that when the communication with said first authenticating server is judged to be impossible, uses said authenticating means and authenticates said mobile terminal.

Reader discloses as follows:

The second authenticating server (local authentication station, 40 in figure 1) and the first authenticating server (foreign provider remote authentication server, 80a-c in figure 1) involves in the authentication process for the mobile terminal (roaming end-stations 20a-d in figure 1)(see, e.g., page 1, paragraph [0016] and figure 1);

The member database of the local authentication servers (440a-c in figure 4) are updated from the remote authentication servers (80a-c in figure 1) (see, e.g., page 4, paragraph [0036], lines 23-27); and

A local private authentication system authenticates members of foreign provider domains solely with local message exchanges (see, e.g., page 1, paragraph [0003], lines 1-7).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Perkins to include local authentication system for authenticating members of foreign provide domain, which located in the roaming area, as taught by Reader in order to reduce authentication delay between a mobile terminal and the first authenticating server to authenticate the mobile terminal and to enhance the tolerance of the communication failure between the second authenticating server and the first authenticating server.

Regarding claims 5, 13 and 22, Perkins and Reader disclose all the limitations of claim as explained above regarding claims 1 and 4 except for correlating process by the second authenticating server.

Reader also discloses as follows:

The second authenticating server (local authentication server, 440a-c in figure 4) notify the of the changes in the authentication states of the mobile terminal (end-stations, 20a-d, in figure 1) based on results of authentication sessions (see, e.g., page 4, paragraph [0036], lines 1-7); and

The second authenticating server (local authentication server, 440a-c in figure 4)

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includes respective member databases having authentication information and the each member database entry maintains a member identifier, and authentication method and a credential (see, e.g., page 4, paragraph [0036], lines 11-23).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Perkins to include the correlating process by the second (local) authenticating server as taught by Reader in order to store the authentication data in the local authenticating server.

Regarding claims 8, 16 and 25, Perkins discloses all the limitations of claim as explained above regarding claims 1 and 3 except for bypassing the second authenticating server when it fails.

Reader also discloses as follows:

The connection between the mobile terminals (roaming end-stations, 20a-d in figure 1) and the first authenticating server (remote authentication server, 80a-c in figure 1) via Internet 970 in figure 1)(see, e.g., page 1, paragraph [0016], lines 1-6).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Perkins to include bypassing the local authentication server when it fails as taught by Reader in order to provide continuously the authentication process through the remote authenticating server with some authentication delay.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeong S. Park whose telephone number is 571-270-

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1597. The examiner can normally be reached on Monday through Thursday 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules can be reached on 571-272--6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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May 8, 2007

FRANTZ JULES
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Frantz Jules', is written over a horizontal line. The signature is stylized with a large, sweeping 'F' and a circular flourish at the end.